PROPERTY PLANNING COMMON ELEMENTS

COMPONENTS OF MASTER PLANS

HABITATS AND THEIR MANAGEMENT

Fish Passage Practices

Description

Fish passage practices address impairments resulting from anthropogenic (human-caused) factors and those caused by beaver. Each of these is described below.

Anthropogenic Impairments

Fish passage practices may be used to reconnect stream reaches where they have been disconnected by human activities or structures (e.g., improperly placed culverts, abandoned or failing dams, ditching, slides).

Dams on inland streams rarely allow fish passage. Over time opportunities may arise to remove small, often antiquated dams. Dams built to provide electricity or power saw and flour mills can partially or completely destroy fish habitat and coldwater temperature regimes. Removal of dams and remnant dam sills remain an important method to restore coldwater fish communities and allow fish passage for re-colonization. Most low-head dams can be quickly and simply eliminated by jack hammering and excavating the concrete structure and replacing it with a weir or vane that allows fish passage. Large dams present significant challenges and require extensive engineering to remove or provide fish passage.

Improperly installed, under-designed or dilapidated bridges and culverts can block fish passage and impound water. Problems with such structures can be addressed through regular maintenance or replacement in many cases.

Considerations

The following aspects must be addressed:

- Proper size to address flood flows and debris passage.
- Elevation and slope to prevent impassable vertical drops or upstream impounding.
- Proper installation and maintenance which limits debris accumulation, washouts or upstream or downstream grade changes.
- Obtaining all applicable water permits.

Beaver

Beaver dam and beaver removal may be necessary to reconnect stream reaches where they have been disconnected by beaver dams. While beaver and trout have evolved together over time, large-scale manipulation of streamside vegetation by humans, allowing growth of early-successional tree species in riparian areas,

encourages heavy beaver colonization and beaver dams. Where they are not regularly removed by the flooding found in higher-gradient streams, excessive dam building can have devastating effects on coldwater temperature regimes, spawning and invertebrate habitat, and adult trout cover. Beaver control and dam removal often are necessary on our best trout streams to maintain quality coldwater fish communities.

Considerations

- Beaver management differs around the state. Refer to the Wisconsin Beaver Management Plan 2015-2025 for more information.